

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>B431 PCT</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT / GB 03 / 02889</b>	International filing date ( <i>day/month/year</i> ) <b>04/07/2003</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>16/07/2002</b>
Applicant <b>TYCO ELECTRONICS RAYCHEM NV</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing :
  - contained in the international application in written form.
  - filed together with the international application in computer readable form.
  - furnished subsequently to this Authority in written form.
  - furnished subsequently to this Authority in computer readable form.
  - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
  - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2.  Certain claims were found unsearchable (See Box I).

3.  Unity of invention is lacking (see Box II).

4. With regard to the title,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

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None of the figures.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/GB 03/ 02889

**Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)**

A device for cleaving an optical fibre (19,31) comprises a fixing mechanism to fix a fixing element (15) to the optical fibre, and a cleaving mechanism to cleave the optical fibre. The fixing element may be a ferrule, and the fixing element may be fixed to the fibre such that the fibre extends through the fixing element. The cleaving mechanism cleaves the fibre preferably when the fixing element has been fixed to the fibre. The cleaving device may be a hand-held, and hand-operated, tool. The device enables the possibility of automatic preset positioning and/or orienting of the cleaved fibre end face (which may be angled to the axis of the fibre) with respect to the fixing element. Attachments may be provided for holding the fibre and fixing element during the cleaving operation and for holding a connector body while the fixing element with the cleaved fibre is inserted into the connector.

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/02889

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G02B6/25

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 976 390 A (GEE ARNOLD E ET AL) 11 December 1990 (1990-12-11)  column 1, line 39 - column 4, line 2; figures 2,4 -----	1,3-7, 14,16, 19,21
X	US 4 893 892 A (ZIEMEK GERHARD ET AL) 16 January 1990 (1990-01-16) column 1, line 50 - column 3, line 46; figures 1-6 -----	1,3,7, 17,18,20
X	US 4 229 876 A (DOTY JOHN S) 28 October 1980 (1980-10-28) column 2, line 38 - column 3, line 30; figures 4,11 ----- -/-	1-7,16, 17,19,21

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

3 September 2003

- 9. 12. 2003

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/02889

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 621 754 A (LONG ERIC L ET AL) 11 November 1986 (1986-11-11) column 2, line 25 - line 41; figures 12,13,14A column 4, line 4 - line 9 column 13, line 11 - line 41 -----	1-8,14, 16,21
X	WO 00 41013 A (BELDYCKI WOJCIECH ;VALDOR FIBER OPTICS INC (US)) 13 July 2000 (2000-07-13) page 2, line 14 - page 3, line 17; figure 16 page 15 - page 16 -----	1-7,16, 19-21

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8,14-22,28

Device for cleaving an optical fibers with various fixing, cleaving and clamping mechanisms

1.1. claims: 1-3,8,16

The fixing element and mechanism

1.2. claims: 4,28

A portable handheld tool

1.3. claims: 14,15

An aperture for removing separated end portions of the cleaved optical fibers

1.4. claims: 17,18

A clamping mechanism including the use of tape to grip the fibers

1.5. claims: 5-7,19-22

The cleaving mechanism

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2. claims: 9-13

Concerns cleaved end-faces being non-perpendicular to the fiber direction

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3. claim: 23

Concerns the addition of a counting device

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4. claims: 29-39

Concerns the addition of an external connector holder to the device

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5. claims: 24-26

Cleaving a plurality of optical fibers simultaneously

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 03/02889

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: 27 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  

Claim 27 not allowed according to Rule 6.2a PCT.  
Claim merely refers to the description and drawings included in the application
  
3.  Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-8, 14-22, 28

### Remark on Protest

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210